

# PROPERTY PLANNING COMMON ELEMENTS

## COMPONENTS OF MASTER PLANS

### HABITATS AND THEIR MANAGEMENT

#### Balsam Fir and White Spruce

##### *Description*

This upland forest community is dominated by white spruce and balsam fir. Associated species include white birch, trembling aspen, red maple, northern white cedar, eastern white pine, eastern hemlock, red pine, black spruce, and balsam-poplar. Mountain ash may occur frequently as a tall shrub or small tree, and other characteristic shrubs include thimbleberry, American fly honeysuckle, beaked hazelnut, and dwarf red raspberry. Large-leaf aster, blue-bead lily, Canada mayflower, wild sarsaparilla, and bunchberry are common understory herbs.

This forest type was associated historically with the Great Lakes, particularly the clay plain of Lake Superior and the eastern side of the northern Door Peninsula on Lake Michigan, and this is where the most extensive and best developed natural stands still occur. Many stands were clear-cut and severely burned in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, resulting in forests dominated by trembling (quaking) aspen and white birch.

##### *Ecological Landscape Opportunities*

Ecological Landscape	Opportunity*
Superior Coastal Plain	M
North Central Forest	I
Northern Lake Michigan Coastal	I
Northwest Lowlands	I
Northeast Sands	P
Northern Highland	P

\*M = Major: major opportunity exists in this Landscape; many significant occurrences are recorded or restorations likely to be successful.

I = Important: several occurrences important to maintaining the community in the state occur in this Landscape.

P = Present: community is present in the Landscape, but better opportunities exist elsewhere.

##### *Rare Species*

Many Species of Greatest Conservation Need (SGCN) are associated with fir-spruce. To learn more, visit the [Northern Forest communities page](#) and click on “Boreal Forest”.



## ***Threats***

- Fragmentation, either by conversion to a non-forest cover type (e.g., shoreline development, agriculture) or conversion of natural forest to plantation, threatens fir-spruce communities and reduces habitat for species that require large blocks.
- Many spruce-fir stands suffer from a lack of species diversity (particularly loss of the conifer component) and loss of distinctive structural features (e.g., snags, coarse woody debris) typical of older forests due to past and current management practices and excessive deer herbivory, reducing habitat for conifer-dependent species.
- Predicted changes in temperature and precipitation associated with climate change are likely to reduce habitat suitability for this forest type.

## ***Management Techniques***

- Clearcut
- Overstory removal
- Shelterwood
- Group selection
- Patch selection
- Seed tree
- Single tree selection
- Planting or direct seeding
- Site preparation
- Intermediate treatments
- Pesticide treatments

## ***Management Considerations***

- Manage natural stands of balsam fir and/or white spruce to perpetuate these species, using the prescriptions outlined in the DNR *Silviculture and Forest Aesthetics Handbook*.
- Manage to maintain or increase the conifer component (white spruce, balsam fir, white pine, white cedar, hemlock) in these stands. Hand planting of white spruce, balsam fir, and white pine may be considered as a means of maintaining and increasing these species.
- In aspen-birch stands where white spruce and balsam fir are well represented in the understory as seedlings, saplings, or small trees, consider converting the stand to fir-spruce.
- Manage to increase structural diversity (large trees, snags, coarse woody debris, etc.) within stands.
- Whenever possible, manage for larger stands and connectedness to surrounding forest.

